REMARKS

This Response serves as the submission accompanying Applicants' Request for Continued Examination (RCE) filed pursuant to 37 C.F.R. §1.114 in response to the final Office Action mailed March 1, 2004. There were three (3) independent claims and a total of twelve (12) claims paid for in the application. No fee for additional claims is due by way of this Response. The Commissioner is authorized to charge any additional fees due by way of this Response, or credit any overpayment, to our Deposit Account No. 19-1090. Claims 1-9 are pending. Claims 5-9 have been withdrawn from consideration by the Examiner.

Rejection Under 35 U.S.C. §102(e)

Claims 1 and 4 were rejected under 35 U.S.C. §102(e) as being anticipated by Hortop (U.S. Patent No. 6,582,840) for the reasons set forth on pages 1-2 of the Office Action.

As set forth in Applicants' prior Amendment, filed December 10, 2003, Applicants respectfully disagree with the Examiner's application of Hortop. Pending claim 1 is directed to a method for determining coolant quality of a fuel cell system comprising, *inter alia*, determining the insulation resistance (*i.e.* the resistance between the load lines and ground) of the load circuit of the fuel cell system. Rather than determining the insulation resistance of the load circuit of a fuel cell system, and as noted by the Examiner, the method disclosed by Hortop measures the stack voltage (*i.e.*, the voltage between the positive and negative terminals of the stack) of a fuel cell system, and then uses the measured stack voltage to determine the resistance, resistivity and conductivity of the coolant. Applicants submit that the stack voltage measured by Hortop is not the same parameter as the insulation resistance of the load circuit as recited in pending claim 1, and, accordingly, Hortop does not disclose every element of pending claim 1. As pending claim 4 is dependent from, and thus contains all the limitations of, claim 1, Hortop also fails to disclose every element of claim 4.

In addition, although Applicants respectively disagree with the foregoing rejection of claims 1 and 4, in order to expedite allowance of the pending claims, Applicants submit herewith a Declaration under 37 C.F.R. §1.131 demonstrating that Applicants both conceived of the invention and reduced the invention to practice prior to January 8, 2001, the U.S. filing date

of Hortop. In particular, attached to the Declaration is a written disclosure document submitted to the DaimlerChrysler AG Intellectual Property Management Department evidencing the conception and actual reduction to practice of the claimed invention in Germany, a World Trade Organization member country, prior to January 8, 2001. In view of this Declaration, and the supporting exhibits, Applicants submit that Hortop is not prior art to the present application.

In view of the foregoing, Applicants respectfully request that the rejection of pending claims 1 and 4 under 35 U.S.C. §102(e) over Hortop be withdrawn.

Rejection Under 35 U.S.C. §103(a)

Claims 2 and 3 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Hortop as applied to claims 1 and 4. This rejection is based on the Examiner's conclusion that Hortop discloses the method of claim 1. As set forth above, Applicants both disagree with the Examiner's application of Hortop and submit that Hortop is not prior art to the present application. Accordingly, Applicants respectfully request that the rejection of claims 2 and 3 under 35 U.S.C. § 103(a) over Hortop also be withdrawn.

Claims 5-9

As a final matter, as noted in Applicants' Response to Restriction Requirement and Preliminary Amendment filed August 19, 2003, Applicants elected the species of claims 1-4 for purpose of initial examination only. Accordingly, should the Examiner consider claims 1-4 to constitute patentable subject matter, the Examiner is respectfully requested to examine claims 5-9 within the context of this application as well.

Conclusion

In light of the above remarks, Applicants respectfully submit that all pending claims are allowable. Applicants, therefore, respectfully request that the Examiner reconsider this application and timely allow all pending claims. Examiner Yuan is encouraged to contact Ms. Wagner by telephone to discuss the above, if desired. If the Examiner notes any

informalities in the claims, he is encouraged to contact Ms. Wagner by telephone to expediently correct such informalities.

Respectfully submitted,

SEED Intellectual Property Law Group PLLC

Emily W. Wagner
Registration No. 50,922

Enclosures:

Declaration under 37 CFR 1.131
Exhibit A – Redacted Copy of Written Disclosure
Exhibit B – Redacted Copy of an English Translation of Written Disclosure

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Fax: (206) 682-6031

\463775

Express Mail No. EV447225360US

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants	:	Anton Sonntag, Josef Sonntag, and Hubert Urban
Application No.	:	10/051,389
Filed	:	January 22, 2002
For	:	METHOD FOR CONTROLLING THE QUALITY OF THE COOLANT FOR FUEL CELL SYSTEMS

Examiner	:	Dah Wei D. Yuan
Art Unit	:	1745
Docket No.	:	130309.426

Mail Stop RCE
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

DECLARATION UNDER 37 C.F.R. §1.131

Commissioner for Patents:

I, Josef Sonntag, declare as follows:

1. I am a co-inventor of the invention described and claimed in U.S. Patent Application No. 10/051,389, filed January 22, 2002, which application claims priority from German Patent Application DE 101 02 247.6, filed January 19, 2001.

2. This declaration demonstrates that the invention claimed in the present U.S. patent application was reduced to practice in Germany prior to January 8, 2001, the U.S. filing date of U.S. Patent No. 6,582,840, issued to Matthew K. Hortop.

3. All of the work described within this declaration, and in the attached Exhibits, was performed in Germany, a World Trade Organization (WTO) member country, and was performed by myself, or with my knowledge, on behalf of DaimlerChrysler AG.

4. Exhibit A is a redacted copy of a written disclosure document submitted to the DaimlerChrysler AG Intellectual Property Management department describing the invention as currently claimed in the present U.S. patent application. An English language translation of the disclosure document is attached hereto as Exhibit B.

5. The disclosure document was signed by myself prior to January 8, 2001, and by Hubert Urban and Anton Sonntag (the other co-inventors) prior to January 8, 2001. As evidenced by the date stamp on the first page of Exhibit A (now redacted), the disclosure document was received by the DaimlerChrysler AG Intellectual Property Management department prior to January 8, 2001.

6. Section 3.1 of the disclosure document describes the work that was performed prior to the date of the disclosure document, including the design and development of a fuel cell system insulation resistance monitoring system. This demonstrates a clear understanding of the inventive concept by myself and the other co-inventors, and a reduction to practice of the claimed invention prior to January 8, 2001. Furthermore, the disclosure document demonstrates that the invention was disclosed to the DaimlerChrysler AG Intellectual Property Management department, who, to my knowledge, diligently coordinated the preparation and filing of German Patent Application DE 101 02 247.6, from which the present U.S. patent application claims priority under 35 U.S.C. §119.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

11 May 2004
Date

Josef Sonntag

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476331_1.DOC

Redacted

Express Mail No. EV447225360US

Erfindungsmeldung

DaimlerChrysler AG
Intellectual Property Management FTP
C106
D-70546 Stuttgart

FTP/S

Eing.:
z. Kenntnis
Ablage
Rest

Internes Zeichen
P0 3 4 2 5 4
Eingangsvermerk

Projekt

wird von FTP ausgefüllt

1. Bezeichnung der Erfindung

Leitfähigkeitskontrolle im Kühlwasser über Isolationswiderstandsüberwachung

2. Erfinderdaten

a)	Titel, Vor- und Zuname Josef Sonntag	Arbeitgeber XCELLSIS GmbH		Erfindungsanteil in % 33
	Beruf/akad. Grad Dipl.-Ing. (FH)	Personalnummer 601696	Stellung im Betrieb * Abteilungsleiter	
	Private Anschrift Weileräcker 27 73230 Kirchheim Teck	Interne Anschrift (Werk/Standort, Abt., Geb./HPC) Neue Str. 95, 73230 Kirchheim Nabern Telefon: 07021/89-3636 Fax: -3682 E-Mail: josef.sonntag@xcellsis.com		Staatsangehörigkeit dt
b)	Titel, Vor- und Zuname Hubert Urban	Arbeitgeber XCELLSIS GmbH		Erfindungsanteil in % 33
	Beruf/akad. Grad Dipl.- Ing. (FH)	Personalnummer 703091	Stellung im Betrieb * Entwicklungsing.	
	Private Anschrift Haldenweg 20 73275 Ohmden	Interne Anschrift (Werk/Standort, Abt., Geb./HPC) Neue Str. 95, 73230 Kirchheim Nabern Telefon: 07021/89-3620 Fax: -3682 E-Mail: hubert.urban@xcellsis.com		Staatsangehörigkeit dt
c)	Titel, Vor- und Zuname Anton Sonntag	Arbeitgeber XCELLSIS GmbH		Erfindungsanteil in % 33
	Beruf/akad. Grad Dipl.-Ing. (FH)	Personalnummer 602804	Stellung im Betrieb * Teamleiter	
	Private Anschrift Dettinger Straße 48 73230 Kirchheim Teck	Interne Anschrift (Werk/Standort, Abt., Geb./HPC) Neue Str. 95, 73230 Kirchheim Nabern Telefon: 07021/89-3677 Fax: -3682 E-Mail: anton.sonntag@xcellsis.com		Staatsangehörigkeit dt
d)	Titel, Vor- und Zuname	Arbeitgeber		Erfindungsanteil in %
	Beruf/akad. Grad	Personalnummer	Stellung im Betrieb *	
	Private Anschrift	Interne Anschrift (Werk/Standort, Abt., Geb./HPC) Telefon: Fax: E-Mail:		Staatsangehörigkeit

*(z.B. Sachbearbeiter, Meister, Abteilungsleiter, Entwicklungsingenieur, wissenschaftl. Mitarbeiter)

☒ weitere Erfinder auf zusätzlichen Formblättern 1 und 2

Exhibit A

3. Ergänzende Angaben

3.1 Welche Arbeiten wurden zur Verwirklichung der Erfindung durchgeführt?

Berechnungen und Untersuchungen an FCS zu dem Zusammenhang von Leitfähigkeit und Isolationswiderstand. Reproduzierung der Meßergebnisse an verschiedene FCS. Auslegung und Entwicklung einer automotivtauglichen Isolationsüberwachung für FCS.

3.2 Ist eine Anwendung der Erfindung geplant (Datum, Produkt, Firma)?

ja

Redacted

3.3 Von der Erfindung haben oder werden Kenntnis erhalten (wer, wie, wann?):
(z.B. externe Personen, Institutionen, Zulieferer/Unterauftragnehmer durch z.B. Bericht, Vortrag, Zusammenarbeit)

--

3.4 Ist die Erfindung im Rahmen eines bezahlten Auftrages, eines Vertrages oder einer öffentlichen Förderung entstanden?	☒ nein ☐ ja	Auftraggeber / Partner Auftragsnummer Auftragsbezeichnung
3.5 Sind Mitarbeiter von Dritten (Fremdfirma, Institut etc.) an der Erfindung beteiligt?	☒ nein ☐ ja	Wenn ja, von wem?
3.6 Ist die Erfindung im Rahmen eines Projektes entstanden?	☐ nein ☒ ja	Projektnummer Projektbezeichnung Necar 2 / 3
3.7 Wurde ein Verbesserungsvorschlag eingereicht?	☒ nein ☐ ja	Nummer des Verbesserungsvorschlags:

Ich versichere (wir versichern), daß meines (unseres) Wissens keine weiteren Personen an der Erfindung beteiligt sind. Ich habe (wir haben) die vorstehenden Fragen vollständig und nach bestem Wissen beantwortet.

a)	Ort, Datum Unterschrift	b)	Ort, Datum Unterschrift
c)	Ort, Datum Unterschrift	d)	Ort, Datum Unterschrift

Bitte unterrichten Sie uns jeweils über die Änderung Ihres Namens, Ihrer Anschrift sowie Ihrer Abteilungsbezeichnung, Austritt oder Pensionierung.

4. Beschreibung der Erfindung

4.1 Welches technische Problem wird durch die Erfindung gelöst?

Kontrolle der Qualität des Kühlwassers von Brennstoffzellenfahrzeugen

Redacted

4.2 Welcher Stand der Technik ist Ihnen hierzu bekannt (z.B. Fach-/Patentliteratur, Konkurrenzprodukte) und worin bestehen dessen Nachteile?

Kontrolle des Kühlwassers mit Hilfe eines Leitfähigkeitssensors

Nachteil: Zusätzlicher Einsatz eines Sensors (=> Kosten)

4.3 Worin besteht die Lösung des Problems? (Hier bitte in Stichworten, ausführliche Beschreibung mit Ausführungsbeispiel/en [Zeichnung/Skizze/Schema] als Anlage)

Kontrollaufgabe wird von Isolationswiderstandsüberwachung (vgl. Patentschrift DE 195 03 749 C1) übernommen, da ein Zusammenhang zwischen der elektrischen Leitfähigkeit und dem Isolationswiderstand besteht (siehe Diagramm).

Anwendung z.B. bei Diagnoseaufgaben in der Wartung:
Beim Fallen des Isolationswiderstandes unter einen festzulegenden Wert => Vorschlag zur Fehlerbehebung: Kühlwasser ersetzen.

4.4 Welche Vorteile werden durch Ihre Erfindung erzielt?

Leitfähigkeitssensor wird überflüssig

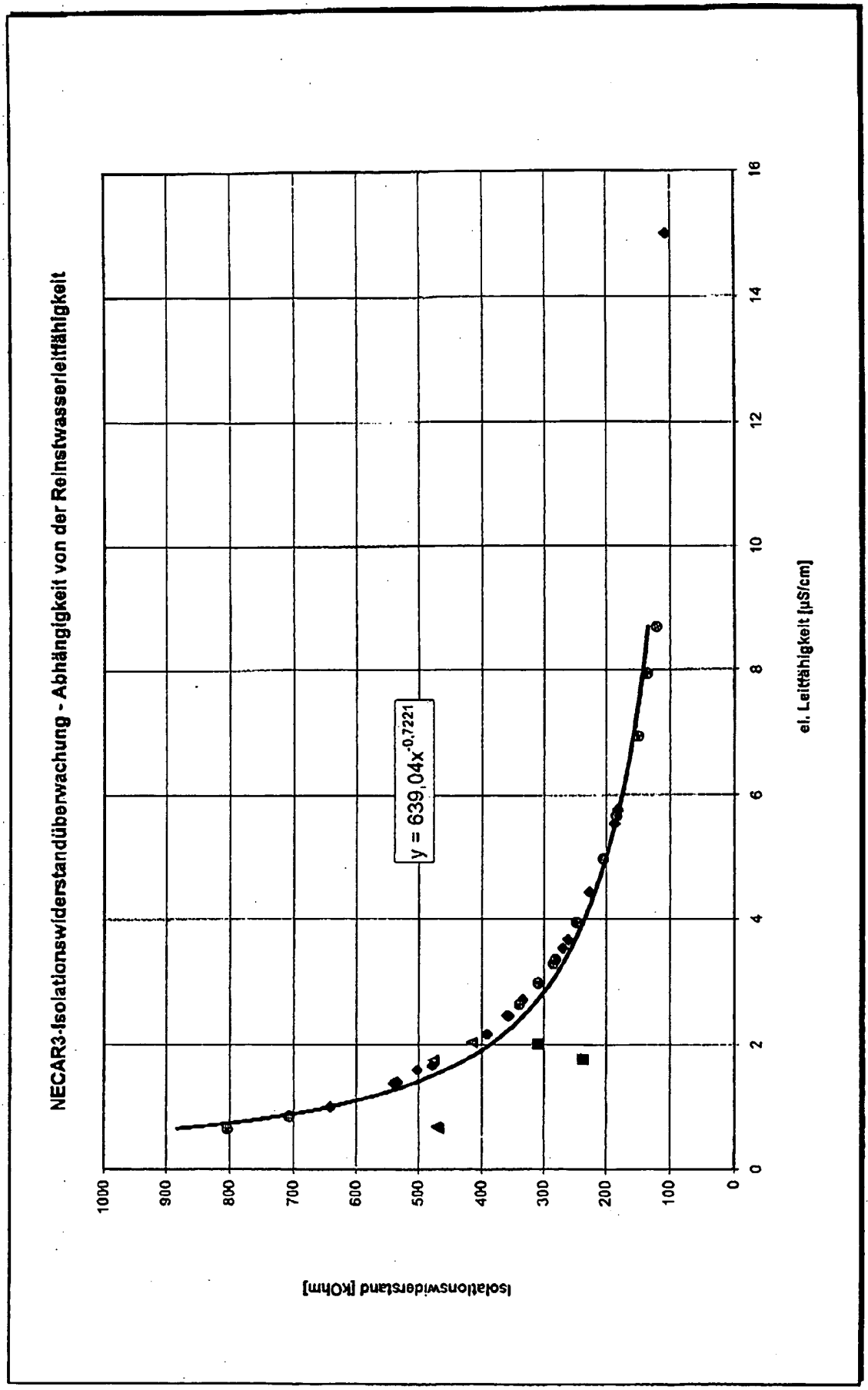
Anlage: __ Blatt Beschreibung

__ Blatt Zeichnung

Sonstiges **Diagramm, Patent**

Redacted

P0 3 4 2 5 4



ISOLATIO.XLS

Redacted

Invention Disclosure

DaimlerChrysler AG
Intellectual Property Management FTP
C106
D-70546 Stuttgart

Internal Reference
Date of receipt
Project
to be filled out by FTP

1. Title of the Invention

Control of conductivity in the cooling water by way of insulation resistance monitoring

2. Inventor Details

a)	Title, First Name, Family Name	Employer		Contribution to Project (%)
	Profession / Acad. Degree	Employee's ID No.	Position in the company *	
	Private Address	Internal Address (Plant/Location, Dept., Bldg./Int.Post Code) Phone: Fax: E-Mail:		Nationality
b)	Title, First Name, Family Name	Employer		Contribution to Project (%)
	Profession / Acad. Degree	Employee's ID No.	Position in the company *	
	Private Address	Internal Address (Plant/Location, Dept., Bldg./Int.Post Code) Phone: Fax: E-Mail:		Nationality
c)	Title, First Name, Family Name	Employer		Contribution to Project (%)
	Profession / Acad. Degree	Employee's ID No.	Position in the company *	
	Private Address	Internal Address (Plant/Location, Dept., Bldg./Int.Post Code) Phone: Fax: E-Mail:		Nationality
d)	Title, First Name, Family Name	Employer		Contribution to Project (%)
	Profession / Acad. Degree	Employee's ID No.	Position in the company *	
	Private Address	Internal Address (Plant/Location, Dept., Bldg./Int.Post Code) Phone: Fax: E-Mail:		Nationality

*(e.g. clerk, master, department manager, engineer, scientific worker)

☐ additional inventors on separate sheets 1 and 2

3. Supplemental Data

3.1 Which work has been carried out to realize the invention?

Calculations and experiments for FCS with regard to the relation between conductivity and insulation resistance. Reproduced the measuring results on various FCS. Design and development of an FCS insulation resistance monitoring system suitable for automotive purposes.

3.2 Is it planned to implement the invention (date, product, company)?

Yes

3.3 The following entities (will) have knowledge of the invention (who, how, when?):
(e.g. external persons, institutions, suppliers/subcontractors by e.g. memoranda, cooperation)

3.4 Did the invention originate in the context of a third party agreement, or a government funded project?	☐ no ☐ yes	Client / Partner Order number Order title
3.5 Did third party employees participate in the realization of this invention?	☐ no ☐ yes	If yes, which parties?
3.6 Did the invention originate in the context of an internal project?	☐ no ☐ yes	Project Number Project Title
3.7 Did this invention originate from a proposal for technical improvement?	☐ no ☐ yes	If yes, what is the proposal reference No.:

I (We) hereby affirm that according to my (our) knowledge no other persons participate in this invention. I (we) have answered the above questions completely and to my (our) best knowledge.

a)	Place, Date	b)	Place, Date
	Signature		Signature
c)	Place, Date	d)	Place, Date
	Signature		Signature

Please advise us of changes of your name, address, department, retirement etc.

4. Disclosure of the Invention

4.1 What technical problem is solved by the invention?

Controlling the quality of the cooling water with the help of a conductivity sensor

4.2 What is the present technology for solving this problem (e.g. patent literature, products of competitors ...), and the drawbacks thereof?

Controlling the cooling water with the help of a conductivity sensor

Disadvantage: Additional sensor (=> costs)

4.3 Outline the Invention (detailed description with drawings / sketches / schemata as enclosure).

The insulation resistance monitoring (see patent DE 195 03 749 C1) also carries out the control task, since there is a correlation between the electrical conductivity and the insulation resistance (see diagram).

Possible application for diagnostic tasks in maintenance:

If the insulation resistance drops below a value to be specified => suggest fault correction: replace cooling water

4.4 What are other conceivable advantages of using this invention? (cost, packaging, environmental etc.)

There no longer is a need for a conductivity sensor

Enclosed: __ Pages of descriptions

__ Pages of drawings

Miscellaneous

Redacted

P0 3 4 2 5 4